

Project Leader's Special Report

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USDA Forest Service - Southern Research Station - 320 Green Street Athens GA 30602 - <http://www.srs.fs.fed.us/disturbance>



Science Highlight-Science in the Eye of the Storm:

Natural disasters such as hurricanes cause great damage and much suffering. Another aspect of Hurricane Katrina was simply the disruption of everyday life for over a million people. Here is one person's story that impacted our project. Ecologist Joe O'Brien has been climbing partners with Lee Dyer, an insect community ecologist and Professor of Ecology and Evolutionary Biology at Tulane University in New Orleans. They have been friends for almost 10 years, since they met as researchers at La Selva Biological Station in Costa Rica. Oddly enough, this hurricane story begins with a rock climbing trip in California. Here's the story, as told by Joe.

Lee is an avid, nay, expert rock climber. We both used climbing ropes to reach the canopy of rainforest trees for our respective research: I was measuring photosynthesis; he was collecting insects and leaf samples. Since tree climbing and rock climbing are allied pursuits, it wasn't long before Lee and I started rock climbing together. A few years ago we began planning for a big wall climb. Lee and I were both born in 1964, and since both our lives were nearing their end (turning 40) we began to plan an appropriate capstone to our climbing careers. The plan: to summit El Capitan, THE big wall, before we turned 40. Yosemite is the birthplace of American climbing, home to some of the best routes in the world. Big walls are climbs that take four or five days to complete, requiring vertical camping (i.e., hanging in space). Our first attempt was in August 2004. Yosemite in August is hot; it was 104° F that week in the valley. We suffered grievously, blundered around on a route called Lurking Fear, and quit after we ran out of water. Nevertheless, undaunted we agreed the next attempt would be different: El Cap before 41!

We decided to risk the heat and try again in late August because it's the only time that fits our schedules. We arrived on August 27, 2005; it was only 95° and at the same time, Hurricane Katrina had just entered the Gulf of Mexico. Because I lived in south Florida for 10 years, I pay attention to hurricanes. I knew New Orleans was under a hurricane watch and mentioned it when I saw Lee in the Reno Airport. Lee

wasn't worried; his lab already had activated the hurricane emergency plan and his family and students had either evacuated New Orleans or were on their way. We listened to the radio that night in our camp near Mono Lake and sure enough, Katrina was making a beeline for the Big Easy. We arrived and set up camp in Yosemite Valley Sunday morning, then hauled 200 pounds of gear up the grueling approach to Lurking Fear. To our irritation, we found that two parties were already on the route; this meant at least a day's delay.

On the approach we had passed the Nose, the route of the first ascent up El Capitan. We were amazed it was empty; even though it's a longer, much more committing route than Lurking Fear, it is world famous and usually has a two- or three-day wait to start. We trudged back to camp to figure out a contingency plan. After a few beers we decided to go big or go bust and attempt the Nose. We bought more food and filled up more water bottles; doing the Nose would require more days of climbing than we had planned. We fixed a rope up the first pitch Sunday night, returned to camp, and waited until Monday afternoon to see what Katrina would do before starting the climb. Lee made some phone calls after the storm had passed; it seemed that New Orleans had dodged the Big One and suffered relatively minor damage. We set off before news of the levee failures was broadcast. Climbing slowly but well, we arrived at the first bivouac, Sickle Ledge at dusk. It looked like we were actually going to make it up the Nose! We had climbed two of the harder pitches with nothing but minor snafus and our speed would only increase. We ate cold cans of chili for dinner and set up camp, which for me was a foam pad on a sloping 3-foot-wide ledge with an 800 foot drop off my left shoulder. I turned on the small short-wave radio I brought to pass the time at night and on long delays and we heard the reports about massive flooding in New Orleans. We both slept fitfully that night for several reasons: 1) it's hard to sleep in a harness while lying on a sloping ledge nearly 1000 feet above the ground; 2) New Orleans was a disaster; 3) a mouse was relentlessly attacking our food cache.



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Joe do you think the water will get this high?



Awaking at dawn we considered whether to continue or retreat. The hard (but obvious) choice was to descend, just when we were likely to succeed. After completing the long process of rappelling down we returned to Reno; from the scenes on TV it became apparent that the situation was much worse than we thought. Lee booked a flight to Houston, which was as close as he could get and it would be days until he could get back into New Orleans. I called him a few days later and got the news that everyone he knew had gotten out safely, but Lee was seriously concerned about his lab. He had several hundred thousands of dollars worth of samples that would be destroyed without refrigeration. He didn't know the condition of the lab or of the equipment and collections that represented the work of a career. I suggested that I come down with a Forest Service vehicle, which might get us through the roadblocks, so he could secure his lab. He wrote me a few days later asking for assistance; I forwarded the message to my supervisors, Ken Outcalt and John Stanturf, who immediately gave me permission to go. Lee and I planned to meet in Ponchatoula early Sunday, the 11th. I made it as far as Jackson, Mississippi late Saturday night and slept in the truck because there were no vacant motels.



Rescuers (left to right.) Lee Dryer, Joe O'Brien and Mark Tobler

I arrived in Ponchatoula about 7:30 am and Lee and his lab manager Mark Tobler were waiting and ready to go. We passed through a police checkpoint at the entrance of Interstate 55 without pause and were heading south amid light traffic, which was mostly emergency vehicles and supply trucks. Leaving the highway in New Orleans proper, we passed through a second National Guard checkpoint after more scrutiny, but eventually we were waved through. We drove on the high ground along the Mississippi River levee, finding considerable wind damage but no evidence of flooding. The streets had been cleared of limbs and we arrived at Tulane

University without any problems. Tulane was dry too; a National Guard unit was camped out on the grounds, but otherwise it was deserted. We pulled up to Lee's building and found a cinderblock wall on top of Lee's brand-new departmental vehicle. Fortunately, the damage was superficial and we headed upstairs. The first thing we noticed as we entered his lab was a



Joe O'Brien removing cinderblocks.

large broken window. The next impression was a strong foul smell, which turned out to be just the beginning of the gag-fest. I'd experienced some bad smells in previous trips to New Orleans; Bourbon Street on Saturday morning for example, but nothing compared to the odors coming from refrigerators and freezers that had been without power for days. It was the smell of wasted effort: rotting samples collected in Ecuador, Costa Rica, and elsewhere. We found some salvageable specimens but most of the fresh or frozen samples were history. Upstairs in the windowless museum room, where 15-years-worth of insect collections were housed, it was pitch black, stifling hot, and oppressively humid. Ominously, there was also the distinct smell of mold. Fortunately, the collection was just beginning to get moldy and the smell came mostly from a small refrigerator. Under those conditions though, it wouldn't take long before everything would be consumed by fungus. Using the desiccant, moth balls, and garbage bags I brought from Athens, I sealed the collections while Lee went to salvage the main lab. Two hours and a roll of duct tape later, I had sealed the cases and boxed up the specimens that were to be evacuated. Returning to the main lab, we extricated the pickup from under the fallen cinderblock wall and began loading up the two trucks. In all we extricated about \$200,000 of equipment, specimens and samples critical for the completion of three doctoral dissertations, and secured one of the most important Neotropical insect collections in the world. We had a few hours left before curfew so we decided to check out the homes of Lee, Mark, and their students and try to rescue a student's cat that had been left behind in a foyer.

To this point, we had seen only moderate wind damage. As soon as we left Tulane and headed a few blocks northeast, we saw evidence of flooding. The first house we checked was high and dry; Mark's house was next and had been flooded but since it was up on short piers there was no water damage. A smashed window showed it had been looted but only a bicycle was missing. We boarded up the broken window with some scavenged lumber and moved on to Lee's house. The water in this area had been about 5-feet deep according to Lee's neighbor who had not evacuated. The water was down to about a foot deep: it was black, opaque, and smelled of a fetid mélange of sulfur dioxide, sewage, and Lake Ponchartrain. As we walked into Lee's house the odor nearly knocked us down. Almost everything was soaked and supporting an explosion of mold and mildew. We were able to salvage a few things from atop the highest shelves but mostly it was a total loss. Time was beginning to run short; we decided to try and rescue the cat. We headed off toward the northeast but water was quickly getting deeper. We were still five blocks away from the cat when the water got too deep to continue. We briefly considered wading, but thought better of it and abandoned the effort, returning to Ponchatoula.

Immediately post-Katrina, offers to Lee of assistance poured in from the research community, including our offer of lab and office space here at Athens. Lee chose to accept a temporary faculty position and lab space at Rice University in Houston, because it is close to New Orleans. Fortunately, Hurricane Rita spared Houston and Lee hopes to get back to Tulane in the near future; the university has announced their intention to reopen for spring semester. Thanks to our trip, Lee and his lab were able to continue working with only a short interruption.



Flooded streets northeast of Tulane University.